

TITLE OF THE INVENTION

## METHODS FOR PROPAGATING ADENOVIRUS AND VIRUS PRODUCED THEREBY

ABSTRACT OF THE DISCLOSURE

5                Various methods for propagating and rescuing multiple serotypes of replication-defective adenovirus in a single adenoviral E1-complementing cell line are disclosed. Typically, replication-defective adenovirus vectors propagate only in cell lines which express E1 proteins of the same serotype or subgroup as the vector. The disclosed methods offer the ability to propagate vectors derived from multiple adenoviral serotypes in a single production cell line

10            which expresses E1 proteins from a single serotype. Propagation in this manner is accomplished by providing all or a portion of an E4 region *in cis* within the genome of the replication-defective adenovirus. The added E4 region or portion thereof is cloned from a virus of the same or highly similar serotype as that of the E1 gene product(s) of the complementing cell line. Interaction between the expressed E1 of the cell line and the heterologous E4 of the replication-defective

15            adenoviral vectors enables their propagation and rescue. The invention bypasses a need in the art to customize specific cell lines to the serotype or subgroup of the adenoviral vector being propagated and enables one to easily and rapidly develop alternative adenoviral serotypes as gene delivery vectors for use as vaccines or as a critical component in gene therapy.